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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,276	02/14/2006	Xiaoshan Wei	470061.402USPC	5924
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EXAMINER NICKERSON, JEFFREY L				
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/533,276

**Applicant(s)**

WEI, XIAOSHAN

**Examiner**

JEFFREY NICKERSON

**Art Unit**

2442

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2006.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 28 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date See Continuation Sheet  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :14 February 2006, 11 May 2007, 18 December 2007.

### **DETAILED ACTION**

1. This communication is in response to Application No. 10/533,276 filed nationally on 14 February 2006 and internationally on 13 August 2003. The preliminary amendment presented on 28 April 2005, which provides change to the specification, abstract, and claims 1-8, is hereby acknowledged. Claims 1-8 have been examined.

### ***Drawings***

2. The replacement drawings presented on 28 April 2005 are accepted.

### ***Specification***

3. The disclosure is objected to because of the following informalities: incorrect word use. Pg 1, line 7 of the applicant's substitute specification contains the word "Intranet", which, given the context, should be "Internet". Appropriate correction is required.

### ***Claim Objections***

4. Claims 1, 4-6, and 8 are objected to under 37 CFR 1.75(d)(1) because of an improper use of antecedent basis.

Regarding claim 1, this claim recites the limitation "the association analysis server" in step (4). There is insufficient antecedent basis for this limitation in the claim. Correction is required.

Regarding claims 4-6, these claims recite the limitation "wherein in step (3)" in lines 1-2. However, there are multiple step (3)s in the dependent chain (both in claim 1 and claim 3). For purposes of further examination the phrase will be considered with respect to claim 3's step (3). Correction is required.

Regarding claim 8, this claim recites the limitations "the IP address" and "the timestamp" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim. Correction is required.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-2 and 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bullard et al (US 6,405,251 B1), and further in view of Schweitzer et al (US 6,418,467 B1).

Regarding claim 1, Bullard teaches a method for collecting network usage data of a user, comprising the following steps:

an access device (RAC's) authenticating and authorizing the user (Bullard: Figure 1, item 12d; Figure 3, items 102; col 7, line 16-38), and an AAA server recording the user's network resource information;

a router, during network access, recording network usage information and sending the network usage information to a NetStream Collector with UDP messages (Bullard: Figure 1, item 12a to items 18; See also Figures 2, 3; col 2, line 25 – col 3, line 54; col 24, line 48-55 for UDP use);

the NSC aggregating the collected network usage information (Bullard: Figure 1, item 14; See also Figures 7, 18; col 19, lines 4-30 for aggregation);

an association analysis server performing association analysis for the aggregated network usage information and the user's network resource information to obtain detailed network usage data of the user (Bullard: Figure 1, item 13; See also Figures 2, 3; col 7, lines 16-38 provides AAA server supplies information; col 18, lines 39-67; col 19, line 44 – col 20, line 45).

Bullard does not teach an AAA server recording the user's network resource information and uploading from the AAA server, nor does Bullard explicitly state association/correlation and aggregation occurs in real-time.

Schweitzer, in a similar filed of endeavor, specifies real-time association/correlation and aggregation (Schweitzer: col 3, line 65 – col 4, line 5); and

an AAA server recording the user's network resource information and uploading from the AAA server (Schweitzer: Figure 1; Figure 4B, item 494; col 4, lines 39-51; col 11, lines 25-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Schweitzer for maintaining user resource information in the AAA server and passing this information to the analysis server. The teachings of Schweitzer, when implemented in the Bullard system, will allow one of ordinary skill in the art to provide more in-depth information from the RADIUS server for subsequent flow collection and analysis. One of ordinary skill in the art would be motivated to utilize the teachings of Schweitzer in the Bullard system in order to increase the accuracy and efficiency of flow correlation and analysis.

Regarding claim 2, the Bullard/Schweitzer system teaches wherein the access device is one of a LAN switch, an access server, and an IP phone gateway (Bullard: Figure 1, items in 16; See also Figure 2, items 42a-42g).

Regarding claim 7, the Bullard/Schweitzer system teaches wherein the network usage information recorded by the router comprises a source IP address, a destination IP address, a source port number, a destination port number, a number of bytes, and a timestamp (Schweitzer: Figure 4B, item 492 for all but source port; Bullard: Figure 11E).

Regarding claim 8, the Bullard/Schweitzer system teaches wherein the association analysis comprises matching the IP address and a start time and a stop time of network access in the user's network resource information to an IP address and a timestamp in the network usage information to determine the user corresponding to the network

usage information (Schweitzer: Figure 4B; col 7, lines 9-60; Bullard: col 7, lines 8 – col 8, line 38 and Table 1).

7. Claims 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bullard et al (US 6,405,251 B1), in view of Schweitzer et al (US 6,418,467 B1), and in further view of Malik et al (US 7,155,608 B1).

Regarding claim 3, the Bullard/Schweitzer system teaches the access device authenticating and authorizing the user and the AAA server recording the user's network resource information further comprising the following steps:

the AAA server analyzing the recording the user's authentication and authorization data (Schweitzer: Figure 1; Figure 4B, item 494; col 4, lines 39-51; col 11, lines 25-67);

the AAA server recording the user's network resource information (Schweitzer: Figure 4B, item 494); and

the AAA server forwarding the user's network resource information to the association analysis server in real-time (Schweitzer: Figure 1; Figure 4B, item 494; col 4, lines 39-51; col 11, lines 25-67; col 3, line 65 – col 4, line 5).

The Bullard/Schweitzer system does not teach:

the access device sending the user's authentication and authorization data to the AAA server;



the AAA server sending control information of the network access permission to the access device; and

the access device allocating resources to the user and sending the user's network resources information to the AAA server.

Malik, in a similar field of endeavor, teaches:

the access device (NAS server) sending the user's authentication and authorization data to the AAA server (Malik: Figure 1, step 2; Figure 4; See also col 4, line 38 – col 6, line 2);

the AAA server sending control information of the network access permission to the access device (Malik: Figure 1, step 3; Figure 4; See also col 4, line 38 – col 6, line 2); and

the access device allocating resources to the user and sending the user's network resources information to the AAA server (Malik: Figure 1, step 4; Figure 4, step 425; See also col 4, line 38 – col 6, line 2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the teachings of Malik utilizing typical handshaking between a NAS and AAA server. The teachings of Malik, when implemented in the Bullard/Schweitzer system, will allow one of ordinary skill in the art to handshake between the AAA server and access device. One of ordinary skill in the art would be motivated to utilize the teachings of Malik in the Bullard/Schweitzer system in order to potentially utilize a many-to-one network configuration between network access devices and AAA servers.

8. Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bullard et al (US 6,405,251 B1), in view of Schweitzer et al (US 6,418,467 B1) and Malik et al (US 7,155,608 B1), and in further view of Official Notice.

Regarding claims 4-6, the Bullard/Schweitzer/Malik system teaches allocating resources such as an IP address (Malik: col 5, lines 1-5), and recording network resource information at a AAA server such as a user account number (user ID), a start time of network access (start timestamp), an IP address, a network access location (station ID), and a service attribute (service type) (Malik: col 5, lines 15-30).

The Bullard/Schweitzer/Malik system does not teach allocating network resources such as start time and stop time of network access, a bandwidth, nor teaches recording network resource information such as a stop time of network access.

An official notice is taken that such use of allocating network resource information such as start time, stop time, and bandwidth by network access devices, and AAA servers recording network resource information such as stop times of network access was well known in the art at the time the invention was made by one of ordinary skill in the art.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize any known network access attribute for allocation restrictions including start time, stop time, and bandwidth, and any known network resource information recording technique including recording stop times of network access, because it would have enabled practicing the Bullard/Schweitzer/Malik system.

***Cited Pertinent Prior Art***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
- a. Balsamo et al (US 2002/0099806 A1) discloses a system for enhancing stored network usage data by identifying and eliminating duplicate information.
  - b. Bullard and others (US 6,625,657 B1; US 6,751,663 B1; US 6,751,663 B1) disclose material similar to the cited Bullard reference.
  - c. Schweitzer and others (US 6,836,797 B2; US 6,985,941 B2; US 7,412,510) disclose material similar to the cited Schweitzer reference.
  - d. Hosain et al (US 7,092,696 B1) discloses an accounting and monitoring system for cellular networks.
  - e. Lecheler (US 6,308,209 B1) discloses system for monitoring network usage for billing purposes.
  - f. Lemler et al (US 6,546,420 B1) discloses system for aggregating network usage information.
  - g. Meyer (US 6,813,645 B1) discloses system for identifying IP ranges against user accounts.
  - h. Roach (US 2002/0087682 A1; US 7,130,901 B2) discloses system for usage sensitive billing and operation services.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY NICKERSON whose telephone number is (571)270-3631. The examiner can normally be reached on M-Th, 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. N./  
Jeffrey Nickerson  
Examiner, Art Unit 2442

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